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ABSTRACT

The invention includes a brazed ceramic ring that separates the positive and negative ends of the battery while still providing a leak-tight seal. The ceramic is aluminum oxide or zirconium oxide or zirconium oxide with 3% yttrium. The invention includes a brazing material that is greater than 50% gold. The invention includes a titanium alloy case (Ti-6Al-4V) which is titanium with 6% aluminum and 4% vanadium as its major alloying elements. The case has the desirable properties of titanium such as high strength for a relatively low weight; and the case has the requisite ability and electro-activity to be used a positive current carrying element where the battery's positive electrode exhibits more than 3.5 V vs. Li/Li⁺.

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